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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/553,914	12/21/2006	Carl Formstone	PPD 70278	1073

85981 7590 09/15/2010

Syngenta Corp Protection, Inc.
410 Swing Road
Greensboro, NC 27409

EXAMINER	
METZMAIER, DANIEL S	
ART UNIT	PAPER NUMBER
1796	

MAIL DATE	DELIVERY MODE
09/15/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/553,914	FORMSTONE ET AL.	
	Examiner	Art Unit	
	Daniel S. Metzmaier	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 June 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4-6,8-11,14-16 and 18-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4-6,8-11,14-16 and 18-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 1, 4-6, 8-11, 14-16 and 18-27 are pending.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 21 June 2010 has been entered.

Specification

2. Applicant is reminded of the proper content of an Abstract of the Disclosure.

In chemical patent abstracts for compounds or compositions, the general nature of the compound or composition should be given as well as its use, *e.g.*, "The compounds are of the class of alkyl benzene sulfonyl ureas, useful as oral anti-diabetics." Exemplification of a species could be illustrative of members of the class. For processes, the type reaction, reagents and process conditions should be stated, generally illustrated by a single example unless variations are necessary.

Complete revision of the content of the abstract is required on a separate sheet.

The Invention includes embodiments and utilities that should be listed, *e.g.*, an example of organic solvent, and the compositions that the antifoams, *e.g.*, polyalkylsilicones and hydrophobic silica, are incorporated, *e.g.*, agrochemicals . The abstract of the disclosure should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words.

Correction is required. See MPEP § 608.01(b).

The following abstract or abstract of similar form would be deemed acceptable:

> Aqueous concentrates and aqueous compositions comprising a water-insoluble liquid antifoam agent, *e.g.*, polydimethylsiloxane optionally together with hydrophobic silicas, are disclosed. The water-insoluble liquid antifoam agent is incorporated into the concentrate or composition as a solution comprising the water-insoluble liquid antifoam agent solubilized in an organic solvent, *e.g.*, diisooctyl adipate, diisopropyl adipate, isopropyl myristate, butyl cocoate and butyl laurate.

See paragraph bridging pages 4 and 5 for "water-insoluble liquid antifoam agent". See page 7, lines 14-29; and page 9, lines 7 and 15; for "1-bromobenzene, 1-bromopropane, 2-bromopropane, 1-bromopentane , cyclohexyl bromide, glycerol formal, 2,2,3,3- tetrafluoro-1-propanol, diisooctyl adipate, diisopropyl adipate, isopropyl myristate, butyl cocoate and butyl laurate".

Claim Interpretation

3. Claims 1, 4-6 and 8 have been amended in the preamble to set forth an "aqueous concentrate comprising" the components set forth in the claims. Claims 21 and 22 also set forth "aqueous concentrate composition comprising". Independent claims 1, 9, 23, and 24 set forth antifoam agent in organic solvent at concentrations at least 10 wt %. Independent claim 25 limits the antifoam agent solubility but does not limit the antifoam agent concentration.

The specification sets forth (page 1, lines 6-8): "A typical application is in respect of aqueous agrochemical formulations supplied as concentrates and intended to be diluted prior to application." It is noted that not all the claims are directed to

agrochemical compositions. "Concentrate" as claimed has been given little patentable weight and is interpreted as aqueous compositions, which can be diluted prior to their intended application. "During patent examination, the pending claims must be 'given their broadest reasonable interpretation consistent with the specification.' >The Federal Circuit's en banc decision in *Phillips v. AWH Corp.*, 415 F.3d 1303, 75 USPQ2d 1321 (Fed. Cir. 2005)". See MPEP 2111

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 4, 6, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Hirose, US 5,252,761. See examples and claims. See also column 1, lines 14-15, wherein specific mention is made to the use of silicones as antifoam agents.

6. Claims 1, 4, 6, 8 and 28-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Kass, US 3,392,040. See entire reference, particularly column 6, lines 42 et seq; and examples 16-19 at column 7. Kass (column 6, lines 42 et seq, particularly lines 38-63) discloses the compositions as aqueous concentrates that are readily dispersable in water.

At least Isopropyl myristate component would inherently have bioperformance enhancing function and/or properties.

7. Claims 1, 4, 6 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Lubowe, US 2,865,859. See entire reference, particularly examples IX, X, XV; column 3, lines 35-41; column 5, lines 48 et seq, particularly lines 57-58; column 6, lines 11-14, 22-24, and 35-40. Lubowe (column 3, lines 35-41, particularly line 40; column 5, lines 48 et seq, particularly lines 57-58; column 6, lines 11-14, 22-24, and 35-40) discloses the solubilizing compositions for compositions employing weed killers, solvent oils, insect repellants, insecticides, antiseptics, fungicidal preparations, and industrial applicability.

Lubowe disclosed use of isopropyl palmitate would inherently have bioperformance enhancing function and/or properties.

8. Claims 1, 4, 6, 8 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Shroot et al, US 5,200,550, as evidenced by SILICONES RHODORSIL Rhodorsil ® OILS 47 V 50 TO 47 V 1000, (December 1996) TECHNICAL DATA SHEET, Rhodia, Chimie, obtained online @ http://www.bentleychemicals.co.uk/files/47v50_-_1000_1.pdf (downloaded 5 September 2010) pages 1-4; and Applicants' characterization at paragraph bridging pages 4 and 5 for “water-insoluble liquid antifoam agent”.

Shroot et al (column 28, lines 31-40) discloses the following compositions:

<u>e) Hydrophobic salve</u>	
4-[5-(1-adamantyl)-2-fluoro-4-methoxybenzoyloxy] benzoic acid	0.300 g
Isopropyl myristate	36.400 g
Silicone oil, sold by Rhone Poulenc under the trade name "Rhodorsil 47 V 300"	36.400 g
Beeswax	13.600 g
Silicone oil, sold by Goldschmidt under the trade name "Abil 300,000cst",	

sufficient amount for 100 g

Shroot et al discloses liquid compositions comprising “Isopropyl myristate” solvent, Silicone oil, sold by Rhone Poulenc under the trade name "Rhodorsil 47 V 300" and Silicone oil, sold by Goldschmidt under the trade name "Abil 300.000cst".

The TECHNICAL DATA SHEET by Rhodia Chimie for Rhodorsil ® OILS 47 V 50 TO 47 V 1000, characterizes "Rhodorsil 47 V 300" as “polydimethylsiloxane oil”.

Applicants characterize and give as an example of the water-insoluble liquid antifoam agent silicone active materials such as a polyalkylsilicone active material, for example a polydimethylsilicone oil.

Since "Rhodorsil 47 V 300" is “polydimethylsiloxane oil” defined by applicants as water-insoluble liquid antifoam agent silicone active materials, the claims are anticipated the Shroot et al reference.

At least Isopropyl myristate or 4-[5-(1-adamantyl)-2-fluoro-4-methoxybenzoyloxy] benzoic acid components would inherently have bioperformance enhancing function and/or properties.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirose, US 5,252,761as applied to claims 1, 4, 6, and 8 above, and further in view of V. Bergeron et al, "Polydimethylsiloxane (PDMS)-based antifoams", Colloids and Surfaces A: Physicochemical and Engineering Aspects 122 (14 April 1997) 103-120, obtained online @ http://www.sciencedirect.com/ .

See Hirose (examples and claims). See also Hirose (column 1, lines 14-15), wherein specific mention is made to the use of silicones as antifoam agents.

Bergeron et al (Abstract and page 104, 2. Mechanisms) discloses antifoams based on polydimethylsiloxane (PDMS) oils are the most widely industrial used antifoams and most formulations contain PDMS dispersed hydrophobically modified particles. These hydrophobically modified particles are discloses by example as (0.1-10 gm) hydrophobically treated silica particles. Bergeron et al (Abstract) discloses the addition of the hydrophobically modified particles increases the PDMS oil antifoam efficiency.

Hirose differs from the claims in the exemplified disclosure of an antifoam composition containing hydrophobic silica.

These references are combinable because they teach silicone, *i.e.*, polydimethylsiloxane (PDMS) oils, and their uses. It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ hydrophobic silica in the antifoam compositions referenced in Hirose (column 1, lines 14-15) as a conventional antifoam functional equivalent thereto for the advantage of increase antifoam efficiency compared to the PDMS oil alone taught in the Bergeron et al reference.

12. Claims 1, 4, 6, 8-11, 14, 16 and18-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lubowe, US 2,865,859, as applied to claims 1, 4, 6 and 30 above, and further in view of Kass, US 3,392,040; and Hirose, US 5,252,761.

Lubowe (column 3, lines 35-41, particularly line 40; column 5, lines 48 et seq, particularly lines 57-58; column 6, lines 11-14, 22-24, and 35-40) discloses the solubilizing compositions for compositions employing weed killers, solvent oils, insect repellants, insecticides, antiseptics, fungicidal preparations, and industrial applicability.

Lubowe discloses the use of isopropyl myristate, isopropyl palmitate and butyl laurate. At least the isopropyl myristate, isopropyl palmitate and butyl laurate components would inherently have bioperformance enhancing function and/or properties.

Lubowe differs from the claims in the exemplified combination of an agrochemical with the claimed ester solvent / silicone oil, the characterization thereof as an antifoam, and the formulation thereof as a water dispersable composition.

Kass (column 6, lines 42 et seq; and examples 16-19 at column 7) discloses industrial compositions comprising silicone oil polymers dissolved in ester solvents. Kass (column 6, lines 42 et seq, particularly lines 38-63) discloses the compositions as aqueous concentrates that are readily dispersable in water.

Hirose (column 1, lines 11 et seq; and column 3, lines 49-52) disclose silicones are used widely in industries including water repellants and antifoams among others. Hirose (examples and claims) disclose the use of mono-ester solvent for dissolving silicone oil. Hirose (column 1, lines 55 et seq) discloses the mono-ester solvent have advantageous properties as high compatability with silicone oils, low irritation, and excellant stability and safety. Hirose (column 3, lines 10-29; and column 7, table 2) disclose the may advantageously further incorporate silicone insoluble oils.

These references are combinable because they teach ester solvent / silicone oil dispersing systems and their uses. It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ the ester solvent / silicone oil dispersing systems taught in the Lubowe, Kass, and Hirose references in making agrochemical compositions incorporating an agrochemical including weed killers, solvent oils, insect repellants, insecticides, antiseptics, and fungicidal preparations mentioned in Lubowe for the advantages of solubilizing the silicone oils taught in Lubowe; and/or as aqueous concentrates that are readily dispersable in water advantageously taught in Kass; and for the advantages of safety and compatabilizing with other ingredients taught in the Hirose reference.

It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ the compositions as aqueous concentrates that are readily dispersable in water in view of the Kass teachings as a common form of agrochemicals for the advantage of cost for storage, transport and delivery of said agrochemicals.

The characterization of the silicone oils as an antifoam would have been obvious as evidence by the Hirose reference (column 1, lines 11 et seq). The respective concentrations claimed are clearly suggested in the prior art and would have logically flowed from the teachings of the above references.

13. Claims 1, 4-6, 8-11, 14-16 and 18-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lubowe, US 2,865,859, further in view of Kass, US 3,392,040; and Hirose, US 5,252,761; as applied to claims 1, 4, 6, 8-11, 14, 16 and 18-30 above, and further in view of Bertho et al, US 6,087,403; and Pirson et al, US 4,338,217.

Lubowe in view of Kass and Hirose differ from claims 5, 15 and 31-33 in the further incorporation of ingredients including the hydrophobic silica (antifoam), a alkylpolyglycoside bioperformance agent and a polysaccharide.

Bertho et al (column 1, lines 4 et seq) discloses self-emulsifying concentrates having application (column 1, lines 16) agrochemical industry. Bertho et al (column 2, lines 60 et seq; and claims) discloses the emulsion forming system employing fatty alcohol and discloses the alkylpolyglycoside. Bertho et al (column 6, lines 31 et seq; and claims) discloses the emulsion forming system comprises 2-60 wt % oil and 1-10 wt % of the alkylpolyglycoside emulsifier system.

Bertho et al (column 6, line 66, to column 7, line 5) disclose ester oils suitable for the emulsion oil phase including propyl myristate, isopropyl palmitate and alkyl laurate among others. Bertho et al (column 7, lines 7-17) further disclose the use of silicone oils as suitable oil components.

Bertho et al (column 7, line 18-32; and column 9, lines 45-50) further disclose conventional; additives that may be incorporated into the compositions including the in the concentrated suspensions the incorporations of polysaccharide thickeners as well as solid particulates.

Pirson et al (abstract and claims) disclose antifoams comprising alkyl (alkoxyether) silicone and (column 2, lines 10-21 and 35-37) hydrophobic silica as pyrogenic silica or silica treated with trimethoxysilanes.

The Pirson et al (column 4, lines 3 et seq) antifoam compositions having related alkyl (alkoxyether) silicones are furthermore closely related to the Sun et al antifoam compositions. The Pirson et al antifoams may further be combined with emulsifiers and/or protective colloids to aid in the dispersibility of the antifoams at the point of application, *i.e.*, aqueous systems (column 1, lines 4-7).

Pirson et al (column 3, lines 48 et seq; particularly lines 63-64) disclose the antifoams comprising (alkoxyether) silicone and hydrophobic silica may further contain liquids other than the organopolysiloxanes (alkyl (alkoxyether) silicones) including esters of carboxylic acids and monovalent alcohols, such as isopropyl myristate, as additives known in the art in preparing antifoams.

These references are combinable because they teach related emulsifiable compositions comprising silicone oils and ester oils in related agrochemical compositions and antifoam compositions and common additives therefore. It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ hydrophobic silica and isopropyl myristate in the compositions of the Bertho et al reference as art recognized additives in preparing compositions comprising antifoams for their advantageous solvency, agrochemical and antifoam efficacy.

It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ mixtures of the silicone oils and ester oils taught in Bertho et al based on the combined teachings and advantages in the Lubowe, Kass and Hirose references.

Allowable Subject Matter

14. Claims including all the limitations of claim 9, 18 and limiting the agrochemical as selected from the group consisting of glyphosate, paraquat, diquat, dicamba, fomesafen, imazethapyr, imazaquin, imazapyr, 2,4-D, glufosinate, mixtures of glyphosate with dicamba and mixtures of glyphosate with diquat would be deemed allowable. See page 4, lines 17-29 and examples of the specification for basis of the above alternative group of agrochemicals.

Response to Arguments

15. Applicant's arguments with respect to claims 1, 4-6, 8-11, 14-16 and 18-27 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (571) 272-1089. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David W. Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Daniel S. Metzmaier/
Primary Examiner, Art Unit 1796

DSM